EAST Search History

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|----------|-------|---|--------------------|---------------------|---------|------------------|
| L1 | 2 | ("3332981").PN. | USPAT; USOCR | OR | OFF | 2008/01/22 08:41 |
| L2 | 1 | ("5665675").PN. | USPAT; USOCR | OR | OFF | 2008/01/22 08:46 |
| L3 | 1 | ("5710094").PN. | USPAT; USOCR | OR | OFF | 2008/01/22 08:48 |
| L4 | 1 | ("5811369").PN. | USPAT; USOCR | OR. | OFF | 2008/01/22 08:50 |
| L5 | 1 | ("5811368").PN. | USPAT; USOCR | OR | OFF | 2008/01/22 09:12 |
| L6 | 14893 | ureido | US-PGPUB; USPAT | OR | OFF | 2008/01/22 09:12 |
| L7 | 9 | ureido and 564/32.ccls. | US-PGPUB; USPAT | OR | OFF | 2008/01/22 09:12 |
| L8 | 1 | ureido and 564/32.ccls. and 564/47.ccls. | US-PGPUB; USPAT | OR | OFF | 2008/01/22 09:12 |
| L9 | 0 | ureido and 514/646.ccls. and 564/47.ccls. | US-PGPUB; USPAT | OR | OFF | 2008/01/22 09:12 |
| L10 | 9 | ureido and 514/646.ccls. | US-PGPUB; USPAT | OR | OFF | 2008/01/22 09:12 |

Page 1

NEWS IPC8

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27

chain nodes : 7 8 9 11 17 25 26 19 20 21 22 23 24 ring nodes :

2 3 4 5 6 10 12 13 14 chain bonds:
1-25 2-26 3-27 4-17 5-7 6-24 7-8 8-9 8-11 9-10 12-19 13-20 14-21 15-22 16-23
ring bonds:
1-2 1-6 2-3 3-4 4-5 5-6 10-12 10-16 12-13 13-14 14-15 15-16 exact/norm bonds:
5-7 7-8 8-9 8-11 9-10 exact bonds:
1-25 2-26 3-27 4-17 6-24 12-19 13-20 14-21 15-22 16-23 normalized bonds:
1-2 1-6 2-3 3-4 4-5 5-6 10-12 10-16 12-13 13-14 14-15 15-16

G1:OH, NH2

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:Atom 11:CLASS 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:CLASS 19:CLASS 20:CLASS 21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS 27:CLASS

L1 STRUCTURE UPLOADED

=> d L1 HAS NO ANSWERS

G1 OH, NH2

L1 STR

Structure attributes must be viewed using STN Express guery preparation.

=> s l1 SAMPLE SEARCH INITIATED 08:08:49 FILE 'REGISTRY' SAMPLE SCREEN SEARCH COMPLETED - 76 TO ITERATE

100.0% PROCESSED 76 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 997 TO 2043

PROJECTED ANSWERS: 0 TO 0

=> s l1 full

FULL SEARCH INITIATED 08:08:52 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 1403 TO ITERATE

100.0% PROCESSED 1403 ITERATIONS 14 ANSWERS

SEARCH TIME: 00.00.01

L3 14 SEA SSS FUL L1

=> fil caplus

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CH. 2 CRN 125853-07-8 CMF C18 H12 C13 S

503

L4 ANSWER 2 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2001:866394 CAPLUS
DOCUMENT NUMBER: 134:35079
Thermal printing material using support containing used paper pulps
used paper pulps
Widerlawa, Yoshiharu Tsuguzuki, Yuji; Hamada, Kaorus
Kimura, Yoshihide
Nihon Seishi K. K., Japan
Jpn. Kokai Tokkyo Koho, 15 pp.
CODENS JKXKAF
DOCUMENT TYPE: Fatent

DOCUMENT TYPE: Patent

Japanese

LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE JP 2000343833
PRIORITY APPLM. INFO.:
OTHER SOURCE(S):
GI JP 1999-156406 JP 1999-156406 A . 20001212 MARPAT 134:35079

The material possesses a heat-sensitive layer based on a colorless or pale colored basic dye precursor and I [X = 0 or S: R = Ph, naphthyl, aralkyl, C1-6 alkyl, C3-6 cycloalkyl, C2-6 alkenyl (these groups may be substituted): Z = C1-6 alkyl or electron-attracting group: n = 0-4] as an organic color developer on a used paper pulp-containing support. The material

rial shows good coloring properties and improved thermal resistance enough to be thermally laminated. 175014-56-9

ΙT

175014-56-9
RL: DEV (Device component use); USES (Uses)
(thermal printing material using support containing used paper pulp and urea derivative color developer)
175014-56-9 CAPLUS
Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

L4 ANSWER 1 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 3 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2000:830070 CAPLUS
DOCUMENT NUMBER: 134:23529
Thermal recording sheet having compound containing diphenyl sulfonic repeating unit
FULUJi, Tadakazur Ogawa, Hidenori; Sumikawa, Naomi;
Imai, Daisuke; Hamada, Kaorur Kimura, Yoshihide
Nihon Seishi K. K., Japan
DOCUMENT TYPE: JANGUAGE: 700EN: JKXKAF
PALENT ACC. NUM. COUNT
1
DATE OF THE OWNER AND THE OWNER A

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

KIND DATE APPLICATION NO.

JP 2000-5019
JP 1999-71216 PATENT NO. DATE

JP 2000326638 A 20001128 JP 2000-5019 20000104
PRIORITY APPLM. INFO: JP 1999-71216 A 19990317
OTHER SOURCE(S):

MARPAT 134:233529
AB The title recording sheet has a heat-sensitive layer containing a compound containing di-Ph sulfonic repeating unit and 0.01-0.9 part aminobenzene sufonamide compound based on one part of a color developer. The recording sheet shows the improved stability towards a plasticizer and the improved

sneet snows the improved stability towards a plasticizer and the improved stability.
175014-56-9
RI: TEM (Technical or engineered material use); USES (Uses)
[supplemental agent for color developer in thermal recording sheet)
175014-56-9 CAPLUS
Benzenesulfonamide, 2-[[(phenylsmino)carbonyl]amino]- (CA INDEX NAME)

L4 ANSWER 4 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1999:679947 CAPLUS
131:315857
Thermal printing material with excellent heat-resistance and plasticizer-resistance
Wakita, Yutaka, Nagai, Tomoaki, Hamada, Kaoru,
Sumikawa, Naomi
Nihon Seishi K. K., Japan
DOCUMENT TYPE: 4ANGUAGE: 7ANGUAGE
LANGUAGE: 7ANGUAGE
ANGUAGE: 7ANGUAGE
JAPANELY ACC. NUM. COUNT: 1

LANGUAGE: J FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------|------------|-----------------|----------|
| | | | | |
| JP 11291636 | A | 19991026 | JP 1998-102746 | 19980414 |
| PRIORITY APPLN. INFO.: | | | JP 1998-102746 | 19980414 |
| OTHER SOURCE(S): | MARPAT | 131:315057 | | |
| CI | | | | |

The thermal printing material contains a leuco dye, a developer represented by a general formula I (X = 0, 5; R = Ph, naphthyl, aralkyl, Cl-6-lower alkyl, C3-6-cycloalkyl, C2-6-lower alkynly Z = Cl-6-lower alkyl, clectron-withdrawing group; n = 0-4; p = 1-5; n + p \leq 5}, and AΒ

glyoxal. 175014-56-9 ΙT

I/SU(4-Do-9)
RL: TEM (Technical or engineered material use); USES (Uses)
(color developer in thermal printing material with excellent
heat-resistance and plasticizer-resistance)
175014-56-9 CAPLUS
Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

ANSWER 5 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN

L4 ANSWER 5 OF 22 CAPLUS COPYRIGHT 2008 ACS ON STN ACCESSION NUMBER: 1999:648642 CAPLUS COPYRIGHT 2008 ACS ON STN ACCESSION NUMBER: 1999:648642 CAPLUS TILLE: 131:264840 Thermosensitive recording mate INVENTOR(5): Sumikawa, Naomi; Nagai, Tomosk

131:264840
Thermosensitive recording material
Sumikawa, Naomi; Nagai, Tomoaki; Wakita, Yutaka;
Hamada, Kaoru
Nihon Seishi K. K., Japan
Jpn. Kokai Tokkyo Koho, 22 pp.
CODEN: JXXXAF PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE:

Patent Japanese LANGUAGE:

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|-----------------------|--------|------------|-----------------|----------|
| | | | | |
| JP 11277910 | A | 19991012 | JP 1998-80954 | 19980327 |
| JP 3336610 | В2 | 20021021 | | |
| RIORITY APPLN. INFO.: | | | JP 1998-80954 | 19980327 |
| THER SOURCE(S): | MARPAT | 131:264840 | | |

In the title recording material having a heat-sensitive recording layer containing a leuco dye precursor and a developer, the developer containing 21 compound I (X = 0, 5; R = (substituted)phenyl, naphthyl, aralkyl, C1-6 alkyl, cycloalkyl, C2-6 alkyl, 2 - C alkyl or electron attractive group; n = 0-4) and a stabilizer II (X, Y = 0, 5; Rl, 2 = H, C1-4 alkyl, halo; Rl with R2 may joint to form an aromatic ring; Z = 0, 5). The invention recording material show superior resistance to moisture and plasticizer and has certain heat resistance good for possible heat-laminating.
175014-56-9
RL: TDM (Technical or engineered material use); USES (Uses) (developer; thermosensitive recording material containing specified developer and stabilizer)
175014-56-9 CAPUUS
Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

ΙŢ

Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------|------------|-----------------|---------|
| | | | | |
| JP 11277909 | A | 19991012 | JP 1998-80953 | 1998032 |
| JP 3336609 | B2 | 20021021 | | |
| PRIORITY APPLN. INFO.: | | | JP 1998-80953 | 1998032 |
| OTHER SOURCE(S): | MARPAT | 131:279340 | | |

In the title recording material having a heat-sensitive recording layer containing a leuce dye precursor and a developer, the developer containing 21 compound I (X = 0, 5; R = (substituted)Ph, naphthyl, aralkyl, C1-6 alkyl, or electron attractive group; n = 0-4) and a stabilizer II (X, Y = 0, 5; R1-4 = H, C1-4 alkyl, halo; R1 with R2, and R3 with R4 may joint to form an aromatic ring). The invention recording material shows superior resistance to moisture and plasticizer.
175014-56-9
RL: TEM (Technical or engineered material use); USES (Uses)
(developer; thermosensitive recording material containing specified developer and stabilizer)
175014-56-9 CAPLUS
Benzenesulfonamide, 2-{[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

L4 ANSWER 7 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN ACCESSION NUMBER: 1999:618717 CAPLUS DOCUMENT NUMBER: 131:264792 THEM: Themal printing material con

INVENTOR (S):

131:264792
Thermal printing material containing (thio)urea compound as color developer
Nagai, Tomoaki, Wakita, Yutaka; Hamada, Kaoru;
Sumikawa, Naomi; Kinishi, Yoshikazu; Suga, Mamoru
Nihon Seishi K. K., Japan; Yoshitomi Fine Chemical K. PATENT ASSIGNEE(S):

K. Jpn. Kokai Tokkyo Koho, 19 pp. CODEN: JKXKAF Patent Japanese 1 SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------|------------|-----------------|----------|
| | | | | |
| JP 11263071 | A | 19990928 | JP 1998-65863 | 19980316 |
| JP 3334126 | B2 | 20021015 | | |
| PRIORITY APPLN. INFO.: | | | JP 1998-65863 | 19980316 |
| OTHER SOURCE(S): | MARPAT | 131:264792 | | |

$$\begin{bmatrix} X & X^{1} & X^{2} & X^{2}$$

The material comprises a support coated with a heat-sensitive layer

AB the material and the material and a colorless or pale colored basic dye, an organic color developer, and >1 compound I or II (R1, R2 = H, C1-4 alkyl, halo, R1 and R2 may link each other to form an aromatic ring, X, Y = 0, S, Z = divalent organic

each other to form an aromatic ring, A, i = 0, 0.

The material provides a high d. image and low d. background and shows high plasticizer and moisture resistance.

IT 244306-20-5 244306-22-7 244306-27-2 244306-30-7 244306-31-8

RL: TEM (Technical or angineered material use); USES (Uses) (thermal printing material containing (thio)urea compound as color developer)

RN 244306-20-5 CAPLUS

ANSWER 7 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN

244306-30-7 CAPLUS
Benzenesulfonamide, N,N'-[sulfonylbis(4,1-phenyleneiminocarbonyl)]bis(2-[(phenyleneiminocarbonyl]amino]- (9CI) (CA INDEX NAME)

244306-31-8 CAPLUS
Benzenesulfonamide, N.N'-[1,6-hexanediylbis(iminocarbonyl)]bis(2-[(phenylamino)carbonyl]amino]- (9CI) (CA INDEX NAME)

ANSWER 7 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN (Continued) Benzenesulfonamide, N,N'-[methylenebis(4,1-phenyleneininocarbonyl)]bis[2-[(phenylamino)carbonyl]amino]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

- C- NHPh

244306-22-7 CAPLUS
Benzenesulfonamide, N,N'-[methylenebis(4,1-phenyleneiminocarbonothioyl)]bis[2-[[(phenylamino)carbonyl]amino]- (9CI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

244306-27-2 CAPLUS
Benzenesulfonamide, N,N'-[(4-methyl-1,3-phenylene)bis(iminocarbonyl)]bis[2-[[(phenylamino)carbonyl]amino]- (9CI) (CA INDEX NAME)

L4 ANSWER 8 OF 22
ACCESSION NUMBER:
DOCUMENT NUMBER:
1111E:
131:264836

INVENTOR(S):
ACCESSION NUMBER:
131:264836

Heat-sensitive recording material with improved plasticizer and oil resistance, containing 2- or 4-(phenylcarbamylsulfamoyl) carbamiltide
Nagai, Tomoaki; Wakita, Yutaka; Hamada, Kaoru;
Sumikawa, Naomi; Kinishii, Yoshikazu; Suga, Mamoru
Nihon Seishi K. K., Japan; Yoshitomi Fine Chemical K. K.

K. Jpn. Kokai Tokkyo Koho, 16 pp. CODEN: JKXXAF Patent Japanese 1 SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO. | KIND | DATE | API | PLICATION NO. | DATE |
|-----------------------|--------|------------|-----|---------------|----------|
| | | | | | |
| JP 11263067 | A | 19990928 | JP | 1998-65862 | 19980316 |
| JP 3334125 | B2 | 20021015 | | | |
| CIORITY APPLN. INFO.: | | | JP | 1998-65862 | 19980316 |
| HER SOURCE(S): | MARPAT | 131:264836 | | | |
| | | | | | |

$$\begin{array}{c|c} & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ & &$$

The material comprises a support having thereon a heat-sensitive color forming layer mainly containing a colorless or light-colored basic dye precursor, an organic color developer, and ≥1 2- or 4-(phenylarbanoylus/famoyl) carbanilide! or II (R1-4 = H, C1-4 slkyl, halo; R1 and R2 or R3 and R4 may form an aromatic ring; X, Y = 0, S) as an organic developer or stabilizer. It shows improved resistance to plasticizers, oils, humid, and heat. 24(613-95-6 24(614-01-5 RL: TEM (Technical or engineered material use); USES (Uses) (developer or stabilizer; heat-sensitive recording material with improved plasticizer and oil resistance) 24(613-95-6 CAPLUS Benzensulfonamide, N-[(phenylamino)carbonyl]-2-[((phenylamino)carbonyl]amino]- (CA INDEX NAME) AB

(Continued)

244614-01-5 CAPLUS
Benzenesulfonamide, N-[{1-naphthalenylamino}thioxomethyl}-2[[(phenylamino)carbonyl)amino]- (CA INDEX NAME)

244613-91-0 244613-93-2 RL: TEM (Technical or engineered material use), USES (Uses) (heat-sensitive recording material with improved plasticizer and oil

resistance)
244613-91-0 CAPLUS
Benzenesulfonamide, 2-[[[phenylamino]carbonyl]amino]-N[[phenylamino]thioxomethyl]- (CA INDEX NAME)

244613-93-2 CAPLUS
Benzenesulfonamide, N-[[(4-methylphenyl)amino]carbonyl]-2[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

L4 ANSWER 9 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:
DOCUMENT NUMBER:
13:80808
Thermal printing material with good heat and light
resistance
Sumikawa, Naomi; Nagai, Tomoaki; Hamada, Kaoru;
Wakita, Yutaka
Nihon Seishi K. K., Japan
Jon. Kokai Tokkyo Koho, 31 pp.
COODEN: JOXXAF
DOCUMENT TYPE:
LANGUAGE:
142panses

Japanese 1

LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

JP 11170706
PRIORITY APPLN. INFO.:
OTHER SOURCE(S):
GI PATENT NO. KIND DATE APPLICATION NO. DATE A 19990629 MARPAT 131:80808

In the material comprising a support having an undercoat layer, a heat-sensitive layer containing a dye precursor and a color developer, and a protective layer, the color developer contains 21 of 1 [X = 0, S; R = (substituted) Ph, naphtlyl, aralkyl, C1-6 alkyl, cycloalkyl, C2-6 alkenyl, 2 = C1-6 alkyl, electron withdrawing group n = 0-4], the undercoat layer and/or the heat-sensitive layer contain a UV short-off agent, and the protective layer contains a fluorescent dye. The material shows good heat and light resistance.

175014-56-9

RL: TEM (Technical or engineered material use); USES (Uses) (thermal printing material containing aminobenzene sulfonamide color developer)

175014-56-9 CAPLUS

Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

L4 ANSWER 10 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1998:779460 CAPLUS
DOCUMENT NUMBER: 130:73875
Thermal printing sheet with excellent heat-resistance and antiplasticization
INVENTOR(S): Nagai, Tomoaki; Wakita, Yutaka; Hamada, Kaoru; Sato, Ayako; Ohashi, Reiji; Nakano, Tomoyuki
Nihon Seishi K. K., Japan
Jpn. Kokai Tokkyo Koho, 24 pp.
CODEN: JOCKAF
DOCUMENT TYPE: Patent

DOCUMENT TYPE: Patent

Japanese 1

LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE JP 10315633
PRIORITY APPLM. INFO.:
OTHER SOURCE(S):
GI ----A 19981202 JP 1998-61129 JP 1997-62692 19980312 A 19970317 MARPAT 130:73875

The title sheet comprises a thermal printing layer comprised of a leuco dye, a color developer I (X = 0, S; R = Ph, naphthyl, aralkyl, C1-6-10ver-alkyl; C3-6-cycloalkyl, C2-6-lover-alkeyl; Z = C1-6-10ver alkyl, electron withdrawing group; n = 0-4; p = 1-5; n + p \pm 5), and a polyurea compound 175014-56-9

175014-56-9
RL: TEM (Technical or engineered material use); USES (USes)
(color developer in thermal printing layer of thermal printing sheet)
175014-56-9 CAPLUS
Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino)- (CA INDEX NAME)

L4 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN ACCESSION NUMBER: 1998:650823 CAPLUS DOCUMENT NUMBER: 129:323901

129:323901
Thermal printing material containing sulfonamide urea compound as color developer
Nagai, Tomoaki, Hamada, Kaoru, Wakida, Yutaka; Sato, Reiko
Nihon Seishi K. K., Japan
Jpn. Kokai Tokkyo Koho, 23 pp.
CODEN: JKOKAF
Patent
Japanese
1 TITLE:

INVENTOR (S):

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------|------------|-----------------|----------|
| | | | | |
| JP 10264536 | A | 19981006 | JP 1997-91331 | 19970327 |
| JP 3306492 | B2 | 20020724 | | |
| PRIORITY APPLN. INFO.: | | | JP 1997-91331 | 19970327 |
| OTHER SOURCE(S): | MARPAT | 129:323901 | | |
| GI | | | | |

The material comprises a support with coatings of an intermediate layer containing hollow polymer particles having an opening obtained by cutting a part of the particle at a plane and a heat-sensitive layer containing a colorless or pale colored basic dye and, as a color developer, ≥ 1 compound I $(X = 0 \text{ or } S; R = \{\text{substituted}\})$ Ph, naphthyl, aralkyl, C1-6 alkyl, C3-6 cycloalkyl, C2-6 alkenyl, R1 = C1-6 alkyl or electron-attracting group; n = 0-4; p = 1-5; $n + p \leq 5$]. The material shows high thermal sensitivity, thermal resistance, antisticking properties prevents adhesion of stain to thermal head.

175014-56-9
RL: TEM (Technical or engineered material use); USES (Uses)
(thermal printing material containing sulfonamide urea compound as color
developer)
175014-56-9 CAPLUS
Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

ANSWER 12 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2008 ACS ON STN ACCESSION NUMBER: 1997:476120 CAPLUS DOCUMENT NUMBER: 127:115323

TITLE: INVENTOR(S):

127:115323
Thermal recording medium
Pukuchi, Tadakazu: Hamada, Kaoru: Nagai, Tomoaki;
Kudoh, Nobuhiro: Sekine, Akio
Nippon Paper Industries Co., Ltd., Japan
Eur. Pat. Appl., 29 pp.
CODEN: EPXXDW
Patent
English

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE:

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| | PATENT | NO. | | | KINI |) | DATE | API | LICATION NO. | | DATE |
|------|----------|-------|-------|-----|------|-----|------------|-----|--------------|---|-----------|
| | | | | | | | | | · | | |
| | EP 778 | 157 | | | A2 | | 19970611 | EP | 1996-308718 | | 19961203 |
| | EP 778 | 157 | | | A3 | | 19980225 | | | | |
| | EP 778 | 157 | | | Bl | | 20010404 | | | | |
| | R: | BE, | DE. | FR, | GB, | IT. | , SE | | | | |
| | JP 092 | 16461 | | | A | | 19970819 | JP | 1996-309825 | | 19961121 |
| | JP 306 | 3078 | | | B2 | | 20000712 | | | | |
| | US 581 | 1368 | | | A | | 19980922 | US | 1996-759705 | | -19961206 |
| | HK 101 | 0356 | | | A1 | | 20010817 | HK | 1998-111281 | | 19981016 |
| PRIC | RITY AP | PLN. | INFO. | . : | | | | JP | 1995-319922 | A | 19951208 |
| OTHE | R SOURCE | E(S): | | | MARE | 'ΑΤ | 127:115323 | | | | |

A thermal recording medium comprises, on a substrate, a thermally sensitive color developing layer which comprises a colorless or pale colored basic leuco dye and an organic color developer, wherein the thermal color developing layer includes (a) 0.01-0.9 parts by weight, based on 1

by weight of the color developer, of one or more aminobenzenesulfonamide derivs. of the formula I wherein X is oxygen or sulfur, R is a group selected from Ph, naphthyl, aralkyl, C1-C6 alkyl, C3-C6 cycloalkyl, and C2-C6 alkenyl, which group is unsubstituted or substituted, Z is C1-C6 alkyl or an electron-attracting group, n is 0 or an integer from 1 to 4 and p is an integer from 1 to 5, providing ntps5 and (b) 0.01-2 parts by weight, based on 1 part by weight of the color developer, of at

one methylolated fatty acid amide of the formula RICONHCH2OH wherein R1 is C11-C21 alkyl. 175014-56-9

1/3014-36-3
RL: TEM (Technical or engineered material use); USES (Uses) (thermal recording materials containing) 175014-56-9 CAPLUS

Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

L4 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:453717 CAPLUS
DOCUMENT NUMBER: 127:88112
Thermal-sensitive recording sheet
Thyper Company (Company (Company

Patent English

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|---------|-----------|------------------|----------|
| | | | | |
| CA 2185846 | A1 | 19970320 | CA 1996-2185846 | 19960918 |
| JP 09142034 | A | 19970603 | JP 1996-232827 | 19960903 |
| JP 3029014 | B2 | 20000404 | | |
| EP 769391 | A1 | 19970423 | EP 1996-306806 | 19960919 |
| EP 769391 | B1 | 19981125 | | |
| R: BE, DE, FR, | GB, IT, | , SE | | |
| US 5753586 | A | 19980519 | US 1996-716547 | 19960919 |
| PRIORITY APPLN. INFO.: | | | JP 1995-240157 A | 19950919 |
| OTHER SOURCE(S): | MARPAT | 127:88112 | | |
| | | | | |

A thermal-sensitive recording sheet comprises a substrate having thereon a thermal-sensitive color-developing layer mainly composed of a leuco dye and an organic color developer, characterized in that the thermal-sensitive color-developing layer includes an aminobenzensulfonamide derivative represented by the formula I, where X indicates an oxygen or sulfur atom, Y indicates a lower alkyl group of 1-6 carbon atoms or an electron-attracting group, m indicates an integer of 0-4, and R indicates a nonsubstituted or substituted Ph group, aralkyl group, lower alkyl group of 1-6 carbon atoms, cycloalkyl group of 3-6 carbon atoms, lower alkenyl group of 2-6 carbon atoms, or naphthyl group, as a color developer and a sulfonamide compound represented by the formula II, where Z indicates a lower alkyl group of 1-6 carbon atoms or an electron-attracting group and nindicates an integer of 0-2, as a sensitizer by the amount of 0.01-2 parts based on 1 part of the color developer.

175014-56-9
RI: TEM (Technical or engineered material use); USES (Uses) ΙT

175014-56-9
RL: TEM (fechnical or engineered material use); USES (Uses)
(color developer for thermal recording materials)
175014-56-9 CAPLUS
Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

L4 ANSWER 13 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER:
DOCUMENT NUMBER:
1171E:
1171E:
1171E:
1172E:

DOCUMENT TYPE:

English

LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO. | KIND DATE | APPLICATION NO. | DATE |
|------------------------|------------------|------------------|----------|
| | | | |
| EP 776769 | A2 19970604 | EP 1996-308592 | 19961128 |
| EP 776769 | A3 19980128 | | |
| EP 776769 | B1 20000202 | | |
| R: BE, DE, FR, | GB, IT, SE | | |
| JP 09207456 | A 19970812 | JP 1996-308559 | 19961120 |
| JP 3063077 | B2 20000712 | | |
| US 5811369 | A 19980922 | US 1996-757766 | 19961127 |
| HK 1000907 | A1 20000728 | HK 1997-102477 | 19971217 |
| PRIORITY APPLN. INFO.: | | JP 1995-313910 A | 19951201 |
| OTHER SOURCE(S): | MARPAT 127:58133 | | |
| GI | | | |

A thermally sensitive recording medium comprises on substrate, a recording layer comprising (a) a colorless or pale colored dye precursor, (b) a color developer which can react with the dye precursor to develop a color and which includes at least one compound of formula I wherein X is oxygen or sulfur and R is a group selected from Ph naphthyl, aralkyl, C1-C6 alkyl, C3-C6 cycloalkyl and C2-C6 alkkenyl, which group is unsubstituted or substituted, Z is C1-C6 alkyl or an electron-attracting group, n is 0 or an integer from 1 to 4, and p is an integer from 1 to 5 provided that n + p \leq 5, and (c) at least one methylolated fatty acid amide of formula RICOMHCH2OH wherein R1 is C11-C21 alkyl. INSES (Uneal N1) R1 TEN (Technical or engineered material use), USES (Uneal

1/5014-56-9
RE: TEM (Technical or engineered material use); USES (Uses)
(thermal recording medium containing fatty acid amide and)
175014-56-9 CAPLUS
Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

L4 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN ACCESSION NUMBER: 1997:447284 CAPLUS DOCUMENT NUMBER: 127:73053 Thermal printing material for the company of the compan Thermal printing material for images with good solvent resistance

Nagai, Tomoaki; Sekine, Akio; Hamada, Kaoru; Fukuchi, Chuichi INVENTOR(S):

Chuichi Jujo Paper Mfg. Co., Ltd., Japan Jpn. Kokai Tokkyo Koho, 23 pp. CODEN: JKXXAF Patent Japanese PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE:

FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE JP 09142029 JP 3063075 PRIORITY APPLN. INFO,: OTHER SOURCE(S): A B2 19970603 20000712 JP 1995-303053 19951121 JP 1995-303053 19951121 MARPAT 127:73053

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

The material comprises a support coated with a heat-sensitive layer

AB The material comprises a support coated with a heat-sensitive layer containing
a colorless dye precursor, ≥1 aminobenzenesulfonamide derivative I {X = 0, S; R = (substituted) Ph, naphtyl, a raikyl, C1-6 alkyl, C3-6 cycloalkyl, C2-6 alkenyl; Z = C1-6 alkyl, electron withdrawing group; n = 0.4; p = 1-5; n + p ±5], ≥1 polyhydroxy phenol II {R1 = C18-35 alkyl, C64H8Z, C12-C64H8Z, C13; R2 = C18-35 alkyl, q = 2-3; G = C12, C02, C0, C, CONH, CONR3; R3 = C5-30 alkyl, S02, S03 S02NH), and a higher fatty acid metal salt. The material gives high-d. images with good solvent resistance and storage stability.

IT 175014-56-9
RL: DEV (Device component use); USES (Uses)
(color-developer; thermal printing material for images with good solvent resistance)
RN 175014-56-9 CAPLUS

RN 175014-56-9 CAPLUS

N Benzenesulfonamide, 2-[{(phenylamino)carbonyl]amino} - (CA INDEX NAME)

Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

ANSWER 15 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN

L4 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:396584 CAPLUS
1997:396584 CAPLUS
11TILE: Thermal recording media containing aminobenzensesulfonamide and aromatic sulfonyl compound Hamada, Kaorus Middrikawa, Yoshimir Wakita, Yutakas Nayai, Tomoakis Sekine, Akios Kaneko, Toshio Jujo Paper Mfg. Co., Ltd., Japan
DOCUMENT TYPE: Patent
LANGUAGE: 13panese

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| KIND | DATE | APPLICATION NO. | DATE |
|--------|-----------|-----------------|---|
| | | | |
| A | 19970415 | JP 1995-261388 | 19951009 |
| B2 | 19990623 | | |
| | | JP 1995-261388 | 19951009 |
| MARPAT | 127:26207 | | |
| | A B2 | A 19970415 | A 19970415 JP 1995-261388 B2 19990623 JP 1995-261388 |

AB The media have a thermal coloring layer containing a colorless or pale-colored dye, an organic color developer containing an aminobenzenesulfomanide derivative I (X = 0, S; Y = C1-6 alkyl, electron-accepting group; p = 0-4; R = Ph, aralkyl, C1-6 alkyl; C3-6 cycloalkyl; C2-6 alkenyl, naphthyl) and 0.01-2 parts (to the developer) an aromatic sulfonyl compound sensitizer II (R1, R2 = 1 halo, C1-6 alkyl; m, n = 0-2) or III (R3, R4 = H, C1-6 alkoxy, aryloxy) on a support. The media give good images with sensitivity.

II 175014-56-9
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)

L4 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1997:383583 CAPLUS
DOCUMENT NUMBER: 127:26194
Thermal recording material with improved thermal sensitivity
INVENTOR(S): Hamada, Kaorur Hidorikawa, Yoshimi; Wakita, Yutaka; Nagal, Tomcakir Sekine, Akior Ueda, Hiroshi Jujo Paper Mfg. Cor., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.
CODEN: JYCXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese

Japanese

LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------|-----------|-----------------|----------|
| ******* | | | | |
| JP 09099646 | A | 19970415 | JP 1995-261389 | 19951009 |
| JP 2967712 | B2 | 19991025 | | |
| PRIORITY APPLN. INFO.: | | | JP 1995-261389 | 19951009 |
| OTHER SOURCE(S): | MARPAT | 127:26194 | | |
| GI . | | | | |

The title recording material comprises a support coated with a heat-sensitive layer containing a basic colorless dye, an aminobenzeneoulfonamide derivative I (X = 0, 5 Y = C1-6 alkyl, electron-attracting group; m = 0-4; R1 = (substituted) Ph, aralkyl, C1-6 alkyl, C3-6 cycloalkyl, C2-6 alkenyl, naphthyl) as a color developer, and an aromatic amide compound II (R2 = H, Me; R3 = H, electron-attracting AΒ

an aromatic amide compound if (no - n, no - n)
group)
as a sensitizer at 0.01-2 parts per 1 part the color developer.

If 175014-56-9
Ri: TEM (Technical or engineered material use); USES (Uses)
(color developer; thermal recording material containing
aminobenzenesulfoamide color developer and aromatic amide sensitizer)

RN 175014-56-9 CAPLUS
CN Benzenesulfonamide, 2-{[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

ANSWER 16 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN (Continued) (thermal recording media contg. aminobenzenesulfonamide color developer and arom. sulfonyl compd. sensitizer) 175014-56-9 CAPLUS Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME) L4

ANSWER 17 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2008 ACS ON STN ACCESSION NUMBER: 1997:342243 CAPLUS DOCUMENT NUMBER: 127:26150

TITLE:

127:26150
Thermal printing material containing benzeneaulfonamide derivative as stabilizer Hamada, Kaorus Fukuchi, Chuichi; Midorikawa, Yoshimi; Takebayashi, Kuniaki; Wakita, Yutaka; Nagai, Tomoaki; Sekine, Akio; Kudo, Nobuhiro Jujo Paper Mfg. Co., Ltd., Japan Jpn. Kokai Tokkyo Koho, 21 pp. CODEN: JKXXAF Patent Japanese 1 INVENTOR (S):

PATENT ASSIGNEE(S): SOURCE:

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|--------|-----------|-----------------|----------|
| | | | | |
| JP 09076633 | A | 19970325 | JP 1995-240158 | 19950919 |
| JP 2967706 | B2 | 19991025 | | |
| PRIORITY APPLN. INFO.: | | | JP 1995-240158 | 19950919 |
| OTHER SOURCE(S): | MARPAT | 127:26150 | | |

02NH2

In the material comprising a support coated with a heat-sensitive layer containing a basic dye and an organic color-developer, the layer contains, AB

stabilizers, 0.01-0.9 parts (based on 1 part color-developer) aminobenzenesulfonamide derivative I [X = 0, S; Y = C1-6 alkyl, electron-withdrawing group; m = 0-4; R = (substituted) Ph, aralkyl, C1-6 alkyl, C3-6 cycloalkyl, C2-6 alkeyl, naphthyl) and 0.01-2 parts (based on 1 part color-developer) sulfonamide compound II (Z = C1-6 alkyl, electron-with drawing group; n = 0-2). The material gives images with good storage stability.
175014-56-9
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Usea)

(Uses)

(thermal printing material containing (amino) benzenesulfonamide derivs.

a5 storage stabilizers) 175014-56-9 CAPLUS

RN CN Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

L4 ANSWER 19 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:428399 CAPLUS
COCUMENT NUMBER: 125:72005
ITILE: Reversible multi-color thermal recording medium
INVENTOR(S): Sekine, Akio
PATENT ASSIGNEE(S): Nippon Paper Industries Co., Ltd., Japan
EUL. Pat. Appl., 64 pp.
CODEN: EPXXDW
DOCUMENT TYPE: LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

PATENT NO. DATE KIND DATE APPLICATION NO. PATENT NO.

EP 709225
EP 709225
R: BE, DE, FR,
JP 08118806
JP 2910027
JP 2910028
CA 2161376
CA 2161376
US 5710094
PRIORITY APPLN. INFO.: 19960501 19980805 EP 1995-307663 19951027 B1 19900805 GB, IT, SE A 19960514 B2 19990623 A 19960618 B2 19990623 A1 19960428 C 20050111 A 19980120 19941027 JP 1994-294142 19941129 CA 1995-2161376 19951025

US 1995-549240 JP 1994-262998 JP 1994-294142 19951027 A 19941027 A 19941129 OTHER SOURCE(S): MARPAT 125:72005

AB A reversible multi-color thermal recording medium comprises, laminated on a substrate: (i) an irreversible thermal composition comprising a colorless

pale basic achromatic dye and an organic irreversible heat-resistant color developer; and (ii) a reversible multi-color thermal composition comprising

ΙT

colorless or pale basic achromatic dye and an organic reversible heat-resistant color developer. 175014-56-9
RL: TEM (Technical or engineered material use), USES (Uses) (irreversible heat-resistant color developer for reversible multi-color thermal recording medium) 175014-56-9 CAPLUS
Benzenesulfonamide, 2-[[(phenylamino)carbonyl]amino]- (CA INDEX NAME)

ANSWER 18 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

L4 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 1996:205047 CAPLUS
DOCUMENT NUMBER: 124:246515
Aninobenzenesulfonamide derivative as color developer for thermosensitive recording material
Nagai, Tomoaki; Hamada, Kacrus Sekine, Akic; Minami, Toshiaki
Nippon Paper Industries Co., Ltd., Japan
Eur. Pat. Appl., 31 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent Paper Industries Co., Expression E DOCUMENT TYPE: LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. DATE |
|------------------------|--------|------------|---|
| | | | |
| EP 693386 | A1 | 19960124 | EP 1995-305078 19950720 |
| EP 693386 | B1 | 19970205 | |
| R: BE, DE, FR, | GB. IT | . SE | |
| JP 08025810 | A | 19960130 | JP 1994-168516 19940721 |
| JP 2819542 | B2 | 19981030 | |
| JP 08053407 | A | 19960227 | JP 1994-187649 19940810 |
| JP 08059603 | A | 19960305 | JP 1994-195568 19940819 |
| JP 08132739 | A | 19960528 | JP 1994-270959 19941104 |
| JP 2819544 | B2 | 19981030 | |
| JP 08290671 | A | 19961105 | JP 1995-97021 19950421 |
| JP 3063069 | B2 | 20000712 | *************************************** |
| JP 08310134 | A | 19961126 | JP 1995-122393 19950522 |
| JP 3063071 | В2 | 20000712 | ** 1,,,, 1,,,, |
| CA 2154323 | A1 | 19960122 | CA 1995-2154323 19950720 |
| CA 2154323 | c | 20010327 | GR 1550 E1043E5 15500.E0 |
| US 5665675 | Ä | 19970909 | US 1995-504784 19950720 |
| PRIORITY APPLN. INFO.: | | 155,0505 | JP 1994-168516 A 19940721 |
| INIONIII AIILM. IMIO | | | JP 1994-187649 A 19940816 |
| | | | JP 1994-195568 A 19940819 |
| | | | JP 1994-270959 A 19941104 |
| | | | JP 1995-97021 A 19950421 |
| | | | |
| COLUMN COLUMN (S) | | 124.246616 | JP 1995-122393 A 19950522 |
| OTHER SOURCE(S): | MARPAT | 124:246515 | |

A thermosensitive recording material comprises a substrate having thereon a recording layer comprising, as main ingredients, a colorless or pale colored dye precursor and a color developer with which the dye precursor reacts to develop a color, wherein the color developer comprises at least one compound of the formula I [X is an O or sulfur atom, R is a (un) substituted Ph group, naphthyl group, aralkyl group, C1-C6 alkyl group, cycloalkyl group of C2-C6 alkenyl group, Z is a C1-C6 alkyl group or an electron-attracting group, and n is O or an integer of 1-4].

175014-56-9
RL: TEM (Technical or engineered material use), USES (Uses)

L4 ANSWER 20 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)
(color developer for thermosensitive materials)
RN 175014-56-9 CAPLUS
CN Benenesulfonamide, 2-{{(phenylamino)carbonyl]amino}- (CA INDEX NAME)

NH-C-NHPh

ACCESSION NUMBER: 1951:6245 CAPLUS

ACCESSION NUMBER: 1951:6245 CAPLUS

DOCUMENT NUMBER: 45:6245

ORIGINAL REFERENCE NO. 45:1144b-f

TITLE: Derivatives of benz-1,2,4-thiadiazine 1,1-dioxide

AUTHOR(S): Parke, D. V.; Williams, R. T.

CORPORATE SOURCE: St. Mary's Hosp. Med. School, London

SOURCE: Journal of the Chemical Society (1950) 1760-3

CODEN: JCSOA9; ISSN: 0368-1769

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

OTHER SOURCE(S): CASREACT 45:6245

GI For diagram(s), see printed CA Issue.

AB o-HENGH\$502H2 (1) (10,9) and 7 g. CO(NH2)2, heated 30 min. at

180', give 948 C6H4.SO2.NH.CO.NH (II), m. 305' (Schrader,

C.A. 12, 1772, gave 287.8'), has a very sweet saccharinlike taste;

He2504 and alkali give the 2-Me derivative, m. 238-40'. II (10 g.) in

10 cc. concentrated H2S04, treated at 0-5' with 3.5 cc. concentrated HN03

and

Cc. concentrated H2S04, gives 9 g. of the 7-NO2 derivative, pale buff, m.

283', intensely bitter, Na salt, deep orange. 2,4
H2N(OZN)C6H3SONH2 (III) (0.8 g.) and 0.7 g. CO(NH2) 2 at 200' give

the 6-NO2 derivative of II, yellow, m. 270', slightly bitter, forms an

orange Na salt. 5,2-Br(NH2)C6H3SONH2 (0.5 g.) gives 0.45 g. of the 7-Br

derivative of II, m. 375', almost tasteless. 3,2-Br(HXCH5H3SONA (229)

mg.) and 150 mg. CO(NH2)2, heated 1 hr. at 180', give 61t of the

5-H0 derivative of II, m. 275', deep blue Fecl3 reaction (acetate, m.

262'). I (2 g.) and 2 g. PhNCO, heated 1 hr. at 100', give

2 g. 1-phenyl-3-(c-sulfamylphenyl)urea (IV), m. 180',
 heated 1 hr. at 220', IV gives PNH2 and II. This indicates that

HCNO [formed by the decomposition of CO(NH2)2] combines with the I to give a

substituted urea which then cyclizes with loss of NH3 to form the III. III

(0.12 g.) and 0.2 cc. HCOZH, heated 1 hr. on the water bath, give a quant.

yield of 6-nitro-1,4,2,2H-benzothiadiazine 1,1-dioxide, yellow, m.

358' (decomposition): 7-Br analog, m. 285'; S-HO analog, light

brown, m. 263', blue color with FeCl3. I (5 g.), 10 cc. Ac2O, and

5 cc. CSHSN, kept overnight, give 4.8 g. of t

NH-C-NHPh

O
II
S- (CH2) 3-NMe2

• HC1

L4 ANSWER 22 OF 22 CAPLUS COPYRIGHT 2008 ACS on STN (Continued)

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                 spectral property data
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                STN AnaVist, Version 2.0, now available with Derwent
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                 Zentralblatt
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                BEILSTEIN updated with new compounds
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NEWS 19 NOV 30 ICSD reloaded with enhancements
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NEWS 21 DEC 14 BEILSTEIN pricing structure to change
NEWS 22 DEC 17 USPATOLD added to additional database clusters
NEWS 23 DEC 17 IMSDRUGCONF removed from database clusters and STN
NEWS 24 DEC 17 DGENE now includes more than 10 million sequences
NEWS 25 DEC 17
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                MEDLINE segment
NEWS 26 DEC 17
                MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
        DEC 17
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STRUCTURE FILE UPDATES: 21 JAN 2008 HIGHEST RN 1000370-19-3 DICTIONARY FILE UPDATES: 21 JAN 2008 HIGHEST RN 1000370-19-3

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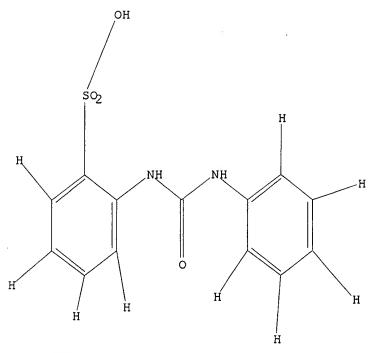
=> Uploading C:\Program Files\Stnexp\Queries\10535683h.str

L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STF



G1 OH,NH2

Structure attributes must be viewed using STN Express query preparation.

=> s 11

SAMPLE SEARCH INITIATED 08:20:31 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 26 TO ITERATE

100.0% PROCESSED 26 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**

BATCH **COMPLETE**

PROJECTED ITERATIONS: 215 TO 825

PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 08:20:33 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 449 TO ITERATE

100.0% PROCESSED 449 ITERATIONS 2 ANSWERS

SEARCH TIME: 00.00.01

L3 2 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION

FULL ESTIMATED COST 178.36 178.57

FILE 'CAPLUS' ENTERED AT 08:20:36 ON 22 JAN 2008
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FILE COVERS 1907 - 22 Jan 2008 VOL 148 ISS 4 FILE LAST UPDATED: 21 Jan 2008 (20080121/ED)

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=> s 13

L4 1 L3

=> d ibib abs hitstr tot

L4 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:979991 CAPLUS

DOCUMENT NUMBER: 145:366486

TITLE: Positive photosensitive composition and image

recording material using the same

INVENTOR(S): Watanabe, Kotaro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan SOURCE: U.S. Pat. Appl. Publ., 40pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
|------------------------|------|----------|-----------------|---|----------|
| | | | | - | |
| US 2006210921 | A1 | 20060921 | US 2006-375254 | | 20060315 |
| JP 2006258980 | A | 20060928 | JP 2005-73819 | | 20050315 |
| PRIORITY APPLN. INFO.: | | • | JP 2005-73819 | Α | 20050315 |
| | | | | | |

OTHER SOURCE(S): MARPAT 145:366486

AB The invention discloses a pos. photosensitive composition comprising (A) a photo acid generator having bivalent functional group selected from NHC(O), NHS(O)2, NHC(S), and NHC:N(Me), (B) a polymer having a phenolic hydroxyl group, and (C) an IR-light absorber. The invention also provides a pos. planog. printing plate precursor using this photosensitive composition for the recording layer.

IT 910312-72-0

RL: MOA (Modifier or additive use); USES (Uses)

(pos. photosensitive composition for planog. printing plate precursor)

RN 910312-72-0 CAPLUS

CN Sulfonium, tris(4-chlorophenyl)-, salt with 2[[(phenylamino)carbonyl]amino]benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 910312-71-9 CMF C13 H11 N2 O4 S

CM 2

CRN 125853-07-8 CMF C18 H12 Cl3 S

=> fil reg COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION FULL ESTIMATED COST 6.41 184.98 DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL ENTRY SESSION CA SUBSCRIBER PRICE -0.80-0.80

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STRUCTURE FILE UPDATES: 21 JAN 2008 HIGHEST RN 1000370-19-3 DICTIONARY FILE UPDATES: 21 JAN 2008 HIGHEST RN 1000370-19-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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http://www.cas.org/support/stngen/stndoc/properties.html

=>

Uploading C:\Program Files\Stnexp\Queries\10503683i.str

L5 STRUCTURE UPLOADED

=> d

L5 HAS NO ANSWERS

L5 STR

G1 OH,NH2

Structure attributes must be viewed using STN Express query preparation.

=> s 15

SAMPLE SEARCH INITIATED 08:21:55 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 26 TO ITERATE

100.0% PROCESSED 26 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 215 TO 825 PROJECTED ANSWERS: 0 TO 0

L6 0 SEA SSS SAM L5

=> s 15 full

FULL SEARCH INITIATED 08:21:58 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 449 TO ITERATE

100.0% PROCESSED 449 ITERATIONS 6 ANSWERS SEARCH TIME: 00.00.01

=> fil caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL ENTRY SESSION 178.36 363.34

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE TOTAL

ENTRY SESSION

CA SUBSCRIBER PRICE

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=> s 17

L8 5 L7

=> d ibib abs hitstr tot

L8 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2006:979991 CAPLUS

DOCUMENT NUMBER: 145:366486

TITLE: Positive photosensitive composition and image

recording material using the same

INVENTOR(S):
Watanabe, Kotaro

PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan SOURCE: U.S. Pat. Appl. Publ., 40pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

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| PATENT NO. | KIND | DATE | APPLICATION NO. | | DATE |
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| | | | | | |
| US 2006210921 | A1 | 20060921 | US 2006-375254 | | 20060315 |
| JP 2006258980 | A | 20060928 | JP 2005-73819 | | 20050315 |
| PRIORITY APPLN. INFO.: | | | JP 2005-73819 | Α | 20050315 |
| OTHER SOURCE(S): | MARPAT | 145:366486 | | | |

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910312-72-0 TΤ

RL: MOA (Modifier or additive use); USES (Uses)

(pos. photosensitive composition for planog. printing plate precursor)

910312-72-0 CAPLUS RN

Sulfonium, tris(4-chlorophenyl)-, salt with 2-CN

[[(phenylamino)carbonyl]amino]benzenesulfonic acid (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 910312-71-9 CMF C13 H11 N2 O4 S

CM

CRN 125853-07-8 CMF C18 H12 C13 S

ANSWER 2 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

1992:526051 CAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 117:126051

TITLE: Combined action of a fluorescent brightening agent and

polyoxyethylene alkylalcohol ether on yeast

Sugihara, Toshiharu AUTHOR(S):

Fac. Educ., Gifu Univ., Gifu, 501-11, Japan CORPORATE SOURCE: SOURCE:

Nippon Kasei Gakkaishi (1992), 43(3), 207-14

CODEN: NKGAEB; ISSN: 0913-5227

DOCUMENT TYPE: Journal English LANGUAGE:

The influence of the fluorescent brightener, di-Na 4,4'bisphenylureidostilbene-2,2'-disulfonate (I), on Saccharomyces cerevisiae yeast was investigated in the presence of a series of polyoxyethylene alkyl ethers (POEs). The nonionic surfactants changed the action of I on the yeast depending on their nature. Hydrophobic surfactants with I decreased more the growth of the yeast and the rate of surviving cells after incubation than with I alone, which was accompanied by stronger

inhibition of sterol biosynthesis and of enzymes related to the electron-transport process. Extracellular enzymes were greatly enhanced in the presence of hydrophobic surfactants and I. On the other hand, the surfactants with low hydrophobicity exhibited the opposite action in reducing the influence of I on the biol. processes in yeast. little effect on yeast. The effects of POE and I on the biochem. processes of yeast correlated well with the hydrophilic-lipophilic balance (HLB) of the surfactants. This phenomenon is interpreted in terms of the change in interaction of I in POE micelles with yeast, and is supported by data on adsorption isotherms of FBA to yeast in the presence of POE. 124412-61-9

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study) (toxicity of, to yeast, polyoxyethylene surfactants effect on, sterol formation and enzymes in relation to)

124412-61-9 CAPLUS RN

IT

Benzenesulfonic acid, 2-[[(phenylamino)carbonyl]amino]-5-[2-[4-CN [[(phenylamino)carbonyl]amino]-2-sulfophenyl]ethenyl]-, disodium salt (9CI) (CA INDEX NAME)

●2 Na

ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:18775 CAPLUS

DOCUMENT NUMBER: 112:18775

TITLE: Influence of fluorescence brightening agents on yeast

Saccharomyces cerevisiae

AUTHOR(S): Sugihara, Toshiharu

CORPORATE SOURCE: Fac. Educ., Gifu Univ., Gifu, 501-11, Japan SOURCE:

Nippon Kasei Gakkaishi (1989), 40(8), 691-6

CODEN: NKGAEB; ISSN: 0913-5227

DOCUMENT TYPE: Journal LANGUAGE: English

The effects of 4 types of fluorescence brightening agents (FBAs) on S. cerevisiae were investigated. Derivs. of stilbene disulfonic acid disodium salt (FBA-1) strongly inhibited yeast growth, while derivs. of coumarin (FBA-2), pyrazoline (FBA-3), and naphthylimide (FBA-4) slightly affected the yeast. Inhibition by each FBA was correlated with the inhibition of sterol biosynthesis and with the enzymes related to the electron transport system in yeast. FBA-1 changed the sterol composition by strongly accumulating the sterols found in the early stages of biosynthesis and by strongly inhibiting the enzymes of electron-transport system. FBA-2, -3, and -4 did not have significant effects on either sterol biosynthesis or enzyme activity.

IT 124412-61-9

RL: BIOL (Biological study)

(Saccharomyces cerevisiae inhibition by, mechanism of)

RN 124412-61-9 CAPLUS

Benzenesulfonic acid, 2-[[(phenylamino)carbonyl]amino]-5-[2-[4-CN [[(phenylamino)carbonyl]amino]-2-sulfophenyl]ethenyl]-, disodium salt

●2 Na

L8 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1967:482960 CAPLUS

DOCUMENT NUMBER: 67:82960

ORIGINAL REFERENCE NO.: 67:15675a,15678a

TITLE: Urea stilbene brighteners

INVENTOR(S): Shultis, Webster A., Jr.; Shanholtzer, Orville G.

PATENT ASSIGNEE(S): General Aniline and Film Corp.

SOURCE: U.S., 2 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|----------|-----------------|----------|
| | | | | |
| US 3332981 | | 19640725 | us 1964-396390 | 19640914 |

GI For diagram(s), see printed CA Issue.

IT 17347-44-3P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (preparation of)

RN 17347-44-3 CAPLUS

CN 3-Stilbenesulfonic acid, 6-chloro-4-(3-phenylureido)- (8CI) (CA INDEX NAME)

L8 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1959:14091 CAPLUS

DOCUMENT NUMBER: 53:14091

ORIGINAL REFERENCE NO.: 53:2629i,2630a-c

TITLE: Adsorption of water-soluble organic compounds on

Lamparsky, D.; Rack, E.

cotton. II

AUTHOR(S):

CORPORATE SOURCE:

Battelle Mem. Inst., Frankfurt, Germany

SOURCE: Seifen, Oele, Fette, Wachse (1958), 84, 640-4

CODEN: SOFWAF; ISSN: 0173-5500

DOCUMENT TYPE: Journal LANGUAGE: Unavailable

cf. C.A. 53, 1704q. The adsorption of Congo red (I), an optical brightener [PhNHCONH(SO3Na)C6H3CH:]2 (II), 4,4'-diaminodiphenylmethane (III), 2-hydroxybiphenyl (IV), and 2,2'-dihydroxybiphenyl (V) on cotton from aqueous solution was studied, and the influence of Na2SO4 (VI), Na5P3O10 (VII), and surface-active agents on the adsorption was investigated. The exptl. procedures were given in the previous article. At pH 5.5, I is adsorbed more strongly than at pH 9.5. In the presence of VI, the adsorption of I is greatly increased at both pH values. VII and surface-active agents decrease the adsorption of I. The adsorption of II is the same at pH 5.5 and 9.5. Presence of VI again increases the adsorption; VII has no influence. III is adsorbed at pH 5.5 to an equal degree with or without addition of VI. At pH 9.5, there is only little adsorption which is markedly increased by VI. In the presence of surface-active agents, there is no adsorption. The adsorption of IV on cotton is independent of time, and follows Henry's distribution law. Formation of a solid solution of IV on cotton is postulated. Addition of VI or VII has no influence. Addition of surface-active agents results in a time-dependent equilibrium and a greatly increased adsorption. Na dodecylbenzenesulfonate is approx. 4 times as effective as Na dodecyl sulfate. V behaves similarly to IV, but the over-all adsorption is lower, and there is no adsorption in the presence of VII and at pH 9.5. 116028-99-0, 3,3'-Stilbenedisulfonic acid, 4,4'-bis(3-IT phenylureido) -

(adsorption on cotton and effect of Na2SO4, Na5P3O10 and surfactants thereon)

RN 116028-99-0 CAPLUS

CN 3,3'-Stilbenedisulfonic acid, 4,4'-bis(3-phenylureido)- (6CI) (CA INDEX NAME)